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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,443	11/07/2001	J. Craig Raese	10011455-1	4173

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HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P.O. Box 272400  
Fort Collins, CO 80527-2400

EXAMINER

GIESY, ADAM

ART UNIT PAPER NUMBER

2656

DATE MAILED: 03/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/046,443

Applicant(s)

RAESE, J. CRAIG

Examiner

Adam R. Giesy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13 and 14 is/are allowed.
- 6) ☒ Claim(s) 1-12 and 15-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8, 10-12, 15-17, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gibson et al. (hereinafter Gibson – US Pat. No. 5,557,596) in view of Pfeiffer (hereinafter Pfeiffer '305 – US Pat. No. 4,423,305) for the same reasons as discussed in the previous Final Office Action, mailed on 11/21/2005.

Furthermore, claims 1, 10, 16, and 22 have been amended to specify atomic resolution storage. The Examiner agrees with Applicant that Atomic Resolution Storage (ARS) is already well-known in the art (see specification of current application - page 1, lines 11-16), and contends that Gibson clearly discloses an ARS system (please also note specification of current application - page 6, lines 19-22). Thus, the rejection as discussed in the aforementioned Office Action remains unchanged.

3. Claims 9 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gibson et al. (hereinafter Gibson – US Pat. No. 5,557,596) in view of Pfeiffer (hereinafter Pfeiffer '305 – US Pat. No. 4,423,305) and further in view of Notte, IV (hereinafter Notte – US Pat. No. 6,515,287 B2) for the same reasons as discussed in the previous Final Office Action, mailed on 11/21/2005.

Furthermore, claim 19 has been amended to specify atomic resolution storage. The Examiner agrees with Applicant that Atomic Resolution Storage (ARS) is already well-known in the art (see specification of current application - page 1, lines 11-16), and contends that Gibson clearly discloses an ARS system (please also note specification of current application - page 6, lines 19-22). Thus, the rejection as discussed in the aforementioned Office Action remains unchanged.

***Allowable Subject Matter***

4. Claims 13 and 14 are allowed for reasons cited in the previous Office Action that was mailed on 4/4/2005.

***Response to Arguments***

5. Applicant's arguments filed 2/17/2006 have been fully considered but they are not persuasive.

Applicant, on pages 8 and 9 of the response filed February 17, 2006 argues that there is no motivation to combine the Gibson and Pfeiffer references. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the Examiner asserts that the inventions are not unrelated, though it is noted that the Applicant disagrees.

Examiner would like to point out that the Gibson reference is related to an Atomic Resolution Storage systems (ARS) as indicated in the Applicant's Admitted Prior Art (see page 6, lines 19-22). Pfeiffer is directed towards semiconductor devices (see column 1, lines 11-14) and all other electron optical instruments (column 1, line 65). Furthermore since the problem of aiming the electron beam was noted in the Pfeiffer patents and the Pfeiffer patents are directed at electron optical systems (column 1, line 65), Examiner asserts that there is clear motivation to combine the references as stated in the previous Office Action.

Furthermore, Applicant argues that the Gibson reference and Pfeiffer references are directed at solving two different problems. Examiner respectfully disagrees. Examiner asserts that the references do not contradict each other as all of the references are directed towards electron optical devices. Also, Examiner asserts that the device disclosed by Pfeiffer is not limited to other than daily checks and that any particular interval would be within the scope of the claims. Thus, the combination of references as discussed in the previous Final Office Action is upheld.

Applicant, on pages 9 and 10 of the response, argues that there is no reasonable expectation of success due to the fact that the device as disclosed by Pfeiffer would not fit inside the confines of the device disclosed in the Gibson reference (see line 1 of page 10). It has been held that it is an obvious matter of design choice to make a device smaller, since such a modification would have involved a mere change in the size of a component(s). A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). Therefore, Examiner

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asserts that it would not be unreasonable for one of ordinary skill in the art to adapt the electron aiming device as disclosed by Pfeiffer to fit in the confines of the ARS system as disclosed by Gibson.

Applicant, on page 10 of the current response, argues that not all elements are taught by the reference(s).

According to the arguments by applicant dealing with claim 1, Applicant argues that the Pfeiffer reference shows voltage being sensed outside the emitter and not "on" the emitter. Examiner asserts that the voltage is sensed "in" the emitter in the current application. Examiner understands the claim language of "sensing the emitter voltage on the emitter" to mean "...in the emitter" as it is supported by the specification and drawings of the current application (see page 13, lines 1-7 and Figure 6A of the current application). Examiner asserts that Pfeiffer is sensing the emitter voltage, only from outside the emitter, but that the same emitter voltage is being sensed. Since no reasonable explanation was provided in the specification of the current application for why the voltage needed to be sensed "in" the emitter, Examiner cited that the element disclosed in the Pfeiffer reference is performing the same task and therefore reads upon the claim as currently written.

Furthermore, Applicant argues that Pfeiffer does not suggest a non-inverted voltage being supplied to the amplifier. Examiner asserts that it would be correct for one of ordinary skill in the art to depict an inverted input to any electrical component with an open dot on the component connection in an electrical diagram. Since that dot is absent in the diagram as provided in the Pfeiffer reference and the specification does

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not specifically state the status of the signal being input into the amplifier, the Examiner can assume that the input is naturally non-inverted (see Pfeiffer '271 Figure 4, elements 34 and 43).

According to the arguments by applicant dealing with claim 10, Applicant argues that Examiner is wrongfully construing the claim language involving the claimed sensing switch. Examiner respectfully disagrees. Since no reasonable explanation was provided in the specification of the current application as to why the voltage needed to be sensed by a "sensing switch" and that there was no switching (as defined by the ordinary and customary meaning of the word 'switching') taking place, Examiner cited that the element disclosed in the Pfeiffer reference is performing the same task and therefore reads upon the claim as currently written.

According to the arguments by applicant dealing with claim 16, Applicant argues that Pfeiffer is not directed to an atomic resolution storage means. Examiner agrees with applicant that Pfeiffer does not disclose atomic resolution storage. However, Pfeiffer does disclose that the device, as disclosed, can be used in semiconductor devices (column 1, lines 11-14) and suggests that the device will also aid in the stability of all electron optical devices (column 1, line 65).

According to the arguments by applicant dealing with claim 19, Applicant argues that the Pfeiffer reference shows voltage being sensed outside the emitter and not "on" the emitter. Examiner asserts that the voltage is sensed "in" the emitter in the current application. Examiner understands the claim language of "sensing the emitter voltage on the emitter" to mean "...in the emitter" as it is supported by the specification and

drawings of the current application (see page 13, lines 1-7 and Figure 6A of the current application). Examiner asserts that Pfeiffer is sensing the emitter voltage, only from outside the emitter, but that the same emitter voltage is being sensed. Since no reasonable explanation was provided in the specification of the current application for why the voltage needed to be sensed "in" the emitter, Examiner cited that the element disclosed in the Pfeiffer reference is performing the same task and therefore reads upon the claim as currently written.

***Continued Examination Under 37 CFR 1.114***

6. All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of



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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

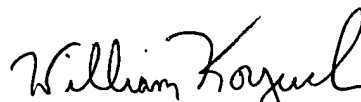
***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adam R. Giesy whose telephone number is (571) 272-7555. The examiner can normally be reached on 8:00am- 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ARG 3/14/2006



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